Safety Data Sheet

The Natural Choice for Flavor and Fragrance Ingredients

HEALTH	3
FLAMMABILITY	2
REACTIVITY	1

Section 1: IDENTIFICATION

Product Name:	**Formic Acid, Natural**
Product Number:	**0248700**
Recommended Use:	Flavorings
Manufacturer:	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992 – USA 845-496-6065 845-496-6248 Fax
Emergency Telephone No.:	1-800-535-5053 (International 1-352-323-3500 collect)

Section 2: HAZARD(s) IDENTIFICATION

OSHA Hazards	Combustible Liquid, Target Organ Effect, Harmful by ingestion. Corrosive
Target Organs	Blood, Central nervous system, Liver, Kidney
GHS Classification	Flammable Liquids (Category 3) Acute toxicity, Oral (Category 4) Acute toxicity, Inhalation (Category 3) Skin corrosion (Category 1A) Serious eye damage (Category 1) Acute aquatic toxicity (Category 3)
GHS Label Elements, including precautionary statement	
Signal Word:	Danger
Pictogram or written description	

Hazard Statement:

H226	Flammable liquid and vapor
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H331	Toxic if inhaled
H402	Harmful to aquatic life

Precautionary Statement(s)

P261	Avoid breathing dust/fume/gas/mist vapors or spray
P280	Wear protective gloves, clothing, eye and face protection
P305 +P351 +P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contacts if present and easy to do. Continue rinsing
P310	Immediately call a POISON CENTER or seek medical attention

HMIS Classification

Health Hazard	3
Chronic Health Hazard	*
Flammability	2
Physical Hazards	0
Potential Health Effects	
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissues of the mucous membranes and upper respiratory tract.
Skin	Harmful if absorbed through skin. Causes skin burns
Eyes	Causes eye burns. Causes severe eye burns
Ingestion	Harmful if swallowed

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Chemical Name	Formic Acid
Common Name:	Formic Acid
Synonyms:	Aminic Acid; Methanoic Acid
CAS #	64-18-6
EC#	200-579-1
Index No.	607-001-00-0
Molecular Formula	CH_2O_2

Section 4: FIRST AID MEASURES

General Advice	Consult a physician. Show this safety data sheet to the doctor in attendance
Contact with eyes:	Rinse thoroughly with plenty of water, keep rinsing during transport to hospital
Contact with skin:	Rinse with cool water; wash with mild soap and warm water. Take person immediately to hospital.
Inhalation:	Provide fresh air, if person not breathing, give artificial respiration, seek medical advice.
Ingestion:	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water, seek medical advice
Clothing:	Remove contaminated clothing and wash before re-use

Section 5: FIREFIGHTING MEASURES

Conditions of flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking
Extinguishing Media	Water spray, Carbon Dioxide, Foam, powder
Special Firefighting Procedures:	Do not stay in danger zone without self contained breathing apparatus Use water spray to cool unopened containers Prevent fire-fighting water from entering surface or ground water
Hazardous Combustion products	Development of hazardous combustion gases or vapors possible in the event of fire – Carbon oxides

Section 6: ACCIDENTIAL RELEASE MEASURES

HazMat Team:	Do not inhale vapors/mist or gas. Evacuate non essential personnel to safe areas. Ensure supply of fresh air in enclosed rooms. Wear respirator, safety glasses, chemical resistant gloves. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Absorb spills:	With absorbent, sweep up and discard in container, set out for disposal. Do not let product enter drains. Discharge into the environment must be avoided

Ventilate area	After sweep up, wash area and ventilate area well

Section 7: HANDLING AND STORAGE

Handling:	Avoid contact with skin and eyes Avoid inhalation of vapor or mist Keep away from sources of ignition-no smoking. Take measures to prevent the buildup of electrostatic charge. Normal measures for preventive fire protection
Storage:	Store tightly closed, in cool, dry well ventilated place. Vent container periodically. Hygroscopic

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Components	CAS-No.	Value	Control parameters	Basis
Formic Acid	64-18-6	TWA	5 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks: Eye, Skin and Upper Respiratory Tract irritation				
		STEL	10 ppm	USA. ACGIH Threshold Limit Values (TLV)

Eye, Skin and Upper Respiratory Tract irritation			
	TWA	5 ppm 9 mg/m3	USA. OSHA – Table Z-1 Limits for Air Contaminants – 1910.1000
The value in mg/m3 is approximate. Substance listed; for more information see OSHA document 1910.1012			
	TWA	5 ppm 9 mg/m3	USA. NIOSH Recommended Exposure Limit

Personal Protective Equipment:	**These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. They should not be construed as offering an approval for any specific use scenario.**
Body Protection:	Protective clothing should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
Respiratory Protection:	Appropriate when vapors are generated – Full Face.
Eye Protection:	Wear eye and face protection – Face Shield.
Hand Protection:	Wear chemically resistant gloves.
Industrial Hygiene:	Handle in accordance with good industrial hygiene and safety practice. Wash hands after working with product.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Colorless to pale tan
Odor:	Pungent, penetrating odor
Boiling Point:	100°C
Flashpoint:	69°C
Melting Point:	No data available

Ignition temperature	540°C
Auto ignition	No data available
Lower Explosion Limit	18 vol%
Upper Explosion Limit	57 vol%
Vapor Pressure:	42.00 hPa (31.5mmHg) at 20°C (68°F) 169.99 hPa (127.5 mmHg) at 50°C (122°F)
Specific Gravity @ 25°C:	1.175-1.210
Solubility	Completely miscible with water, alcohol, ether and glycerol.
Relative vapor density	1.59 – (Air =1.0)

Section 10: STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions
Conditions to be avoided	Heat, flames, and sparks
Substances to be avoided	Strong oxidizing agents, strong bases, powdered metals
Hazardous decomposition products:	formed under fire conditions – Carbon Oxides.

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity	
LD50, Oral Rat	1,100 mg/kg
LC50 Inhalation Rat	7.4 mg/l 4h 15,000 mg/m3 0.25h
LD50 Dermal Rabbit	No data available
Skin corrosion/irritation	Skin-Rabbit – Severe skin irritation – Draize Test
Serious eye damage/eye irritation	Eyes-Rabbit- Severe eye irritation
Respiratory or Skin sensitization	Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals
Germ cell mutagenicity	No data available

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity — No data available

Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion	Harmful if swallowed
Skin	Harmful if absorbed through skin. Causes skin burns
Eyes	Causes eye burns. Causes severe eye burns

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin; spasm, inflammation and

edema of the larynx, bronchi, pneumonitis, pulmonary edema, burning sensation, cough, wheezing laryngitis, shortness of breath, headache, nausea, vomiting

RTECS: LQ4900000

Section 12: ECOLOGICAL INFORMATION

Biodegradability	>90% - Readily biodegradable
Biochemical Oxygen	86 mg/g (Demand BOD)
Chemical Oxygen	348 mg/g (Demand COD)

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal

Harmful to aquatic life

Section 13: DISPOSAL CONSIDERATIONS

Product:	According to local regulations
Packaging:	According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US) UN Number / Name	UN1779 Formic Acid, Class 8,(3) Packing Group II (RQ 5000lbs)
IMDG UN Number / Name	UN1779 Formic Acid, Class 8,(3) Packing Group II
IATA UN Number / Name	UN1779 Formic Acid, Class 8,(3) Packing Group II

Section 15: REGULATORY INFORMATION

OSHA Hazards:	Combustible liquid, target organ effect, harmful by ingestion, corrosive.
SARA 302 Components:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components:	The following components are subject to reporting levels established by SARA Title III, Section 313. Formic Acid CAS-No. 64-18-6 Rev. Date: 07/01/2007
SARA 311 /312 Hazards:	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
Massachusetts Right To Know Components	Formic Acid CAS-No. 64-18-6 Rev. Date: 07/01/2007
Pennsylvania Right To Know Components	Formic Acid CAS-No. 64-18-6 Rev. Date: 07/01/2007
New Jersey Right To Know Components	Formic Acid CAS-No. 64-18-6 Rev. Date: 07/01/2007
California Prop. 65 Components:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm

Section 16: OTHER INFORMATION

Aurochemicals provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Aurochemicals makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Aurochemicals will not be responsible, nor held liable, for damages resulting from use of or reliance upon this information.

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